

## **High Throughput Monte-Carlo modelling using the Computational Grid.**

**D. Abramson**

*Faculty of Information Technology, Monash University, Clayton, VIC, Australia*

The Computational Grid has promised a great deal in support of innovative applications, particularly in science and engineering. In particular, the Grid provides an ideal platform for running large Monte-carlo applications, which are "embarrassingly parallel" and require little inter-process communication. However, developing applications for this highly distributed, and often faulty, infrastructure can be demanding, and scientists often resort to using local infrastructure instead.

Over the past 10 years we have developed a generic software platform, called Nimrod, that simplifies the execution of large Grid based experiments. Nimrod manages the process of generating, managing and executing these computationally demanding experiments with little user interaction and involvement. It has been applied to a very wide range of applications from quantum chemistry to public health policy. In this talk I will show how Nimrod can be applied to large Monte-carlo experiments, and will discuss some specific work we are doing to produce tailored portals for such work.